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THINKING-RED-IN-WARGAMING WORKSHOP:
OPPORTUNITIES FOR DECEPTION AND COUNTERDECEPTION
IN THE RED PLANNING PROCESS

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PREFACE

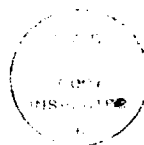
There seems to be a variety of motives for urging military analysts to "think Red" but they all cook down to one: to increase the realism with which Red is portrayed in war games and simulations in order to enhance the credibility of the results. But it is worth making explicit two closely related reasons.

As the sophistication of modelling efforts increases, there is a desire to increase the interactivity within the models. Interactivity requires that the Red side's behavior be accurately modelled. A smarter, more reactive opponent would make the simulation not only more realistic, but more interesting and more educational as well.

A smarter opponent would also facilitate the study of more innovative operational concepts as distinct from studies of weapon and system effects. It might, thereby, encourage the exploration of more "off axis" scenarios. Even if nearly all these were found to be of little utility, they would provoke questions and detailed analyses that would add to the confidence with which we make our operational decisions.

We look to a future in which we have cause to hope the size, if not the capabilities, of the forces facing each other in Europe will be considerably reduced. This argues that the doctrines and operational concepts of both sides will undergo significant changes in the next few years. Under such conditions it is imperative that more dynamic, interactive means of studying these changes be developed.

This paper is a small contribution in that direction. It attempts a fresh, highly aggregated look at Soviet doctrine from a particular point of view—that of the potentialities and vulnerabilities of the Soviet military planning system for and to deception.



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INTRODUCTION

For three days in June 1988 a substantial representation of the U.S. military modelling and intelligence communities met under the auspices of the National Defense University (NDU). The author was asked to present an informal talk to a working group concerned with intelligence. The subject was the potential for and vulnerability to deception of the Soviet military planning system in an operational context.

What was meant by that was a view of deception focusing on why such activity is attempted and what objectives deception is expected to achieve. This approach contrasts with the more usual focus on the means and methods of deception in which deception is treated as a functional activity encompassing a defined set of activities, hardware, and capabilities.

It is hoped that this presentation will show that deception cannot be understood outside the operational context. Many, if not all, military activities can have dual purposes. For example, reserves are created to provide insurance against failure as well as to exploit success. Beyond this, however, the size, location, and activities of a reserve force can be managed so as to influence the behavior of a watching enemy to friendly advantage.

Whether, in fact, reserves are used in this way depends on many things, not all of them under friendly control. But any view of deception that does not take account of the inherently deceptive aspect of operations is partial and will lead to defective conclusions.

This paper suggests that the best Soviet professionals may understand this better than most of their Western counterparts. But there is no reason why that should continue to be the case.

This paper also suggests three approaches to studying deception with aid of models and simulations. Let us reiterate the offer made at that point in the paper, if anyone is interested in pursuing these or other approaches to studying deception with models, we would like to cooperate with them.

The following is a lightly edited transcript of an informal talk.

THINKING RED IN WARGAMING WORKSHOP
OPPORTUNITIES FOR DECEPTION AND COUNTERDECEPTION
IN THE RED PLANNING PROCESS
FRED FEER/ROOM 217
1400-1700 WEDNESDAY, JUNE 22, 1988

I guess to start a couple of words by way of introduction and background would be worthwhile. Up until not many years ago I was an intelligence type. I spent a few years in the Army in counterintelligence and about 15 years in CIA as an intelligence analyst working on various parts of the world including the Soviet Union. Then for a number of years after I was in a small consulting company that worked primarily for national intelligence agencies, particularly Air Force, NSA, and the IC staff. For the past 3 1/2 years, I've been at RAND where I've been looking at things from a nonintelligence point of view. Most of that time I've been trying to analyze the problem of deception from the U.S. point of view; trying to understand it better, to be able to give some advice to the U.S. Army on doctrinal issues related to deception.

So what I'm going to give you here are three things primarily. One is a very brief distillation of what I've come to the conclusion deception is and what the problem is, because I think it may be different from the idea that many others hold. Second, a cartoon view of the Soviet planning process that I've picked up, with due apologies, from involvement with the model developed at the C3CM Joint Test Force, Kirtland AFB by virtue of having attended one of the training courses that the C3CM JTF gave last year. Finally, some ideas I've had, not about modelling because I'm not a modeller or an OR type, but some points of attack that modellers could use to get at the problem of how to model deception, and that problem will be clear I think from where I start.

First, a couple of necessary preliminaries: we use the word *operation* a lot, and in our terms *operation* is a very flexible term. It can be used to refer to virtually any military activity from the smallest to the largest.

I think it's interesting to contrast this with the Soviet definition from the Soviet military encyclopedia of 1983: "*Operation*—an aggregate of battles, engagements, strikes, and maneuvers coordinated and interlinked in objective tasks" and it goes on for another long paragraph. It gives something of a flavor of the Soviet approach to military operations and planning. It's a comprehensive, integrative approach that is clearly reflected in the planning process I think they use.

This point about integration is reinforced, for example, in recent Soviet writings such as Kiryan's¹ *The Element of Surprise in Offensive Operations of the Great Patriotic War* and Sverdlov's² *Forward Detachments in Combat*. They make the point that in the later stages of WWII the importance of reconnaissance in force went beyond the confines of tactics and developed into an operational factor.

In other words, the whole concept of a reconnaissance in force, what it was, what its purpose was, how it was used, was elaborated and integrated into the larger Soviet view of what operations were. That becomes important in terms of deception opportunities created by the Soviet planning system because reconnaissance in force became a deceptive technique. It became something that could be used to conceal the main point of attack by conducting reconnaissance in force across a segment of the front outside the breakthrough sector and therefore a way to ensure security of the actual point of the main effort even after the operation had begun.

I think this is a central problem for intelligence. The notion that we can look for particular kinds of activities and take the appearance of those activities as diagnostic of where certain other activities will take place is a false assumption. The Soviets long ago discovered how to cover that sort of obvious footprint.

Let me pick up then with a definition of deception—what it is I mean when I use the word. There are two ways to define it. The first is, deception is deliberate military activity undertaken with the intent to manipulate and exploit the behavior of the enemy. It is not tricks and gimmicks and tactics, it is not playing with the perceptions of the other side. There's no point in doing it if you have not planned to exploit the situation you've created.

It is, in fact, an inherent quality of good operations. Good operations are inherently deceptive, and I think that's another conclusion the Soviets came to a long time ago as they learned during World War II and in their analyses of operations since then.

In an operational sense, you can define deception as did General Dudley Clarke, the man in command of British deception in the Middle East who had trouble selling the idea of deception operations to his various chiefs. He had trouble until he discovered that the proper approach was not to try to sell deception operations, but rather asking this type of question,

¹M. M. Kiryan (ed.), *The Element of Surprise in the Offensive Operations of the Great Patriotic War*, Moscow, 1986.

²Colonel F. d. Sverdlov, *Forward Detachments in Combat*, Voenizdat, Moscow, 1986. "[Forward detachment] operations on a broad front deprive the enemy of the opportunity to maneuver his reserves," is one example of this.

"If you had the ear of the enemy commander and you were reasonably sure that he would act as directed, what would you tell him to do?"³

The purpose of deception is to manipulate his behavior, to get him to cooperate in his own defeat. So the question is, what do you want him to do? Not what you want him to think, or believe, or perceive, but do.

With that, let me go into this cartoon image of the Soviet planning system. It starts with a mission order. There is an objective that has been defined by higher authority and the responsibility of the planner is to come up with the design of an operation that will accomplish that objective. All else is means. All the military forces available, all the coordination, all the rest of it, are merely means to be used to achieve that stated objective.

That objective is normally stated in geographic, temporal, and balance terms. That is, the objective is to be achieved by the arrival of friendly forces at a certain point, at a certain time, with one's own forces in a certain correlation vis-a-vis the opposing forces. And the purpose of that correlation is to facilitate the transition that the planners would already have begun from the operation currently under execution to the next one. The Soviet's intention is to conduct continuous operations to try to overcome the inertia that inevitably occurs as the resources built up of the purpose for conducting one operation are exhausted and as enemy resistance builds. In World War II and previous wars there developed an episodic approach to major operations. One lesson the Soviet have taken from World War II and the subsequent analysis, particularly looking at Europe, is that they can't afford that. That they have to essentially win the war in one continuous operation. So the defining of operations in such terms as "facilitate the transition from one to the other with minimum delay between" is an essential part of the process.

11 the first question for the planner is, what is one's own capabilities, i.e., what is it one would want to do with one's own forces given the objective, the second is, what is the enemy likely to do in reaction to friendly force actions? In other words, the Soviet planning process is, by training and regulation, an iterative one from the beginning. Each iteration generates an alternative operation. The Soviet planning process is, in fact, a gaming simulation process that tests various courses of action against likely opposing actions given an understanding of the magnitudes and capabilities of both forces. The final plan then is a course of action that meets the stipulated time, geographic, and correlation parameters set by the senior commander at the least cost to friendly forces. The other courses of action can become the basis for alternative, contingency, or deception plans.

³David Mure, *Master of Deception: Tangled Webs in London and the Middle East*, William Kimber, London, 1980, pp. 81-82.

In the process, therefore, the Soviets have gone through at least two plans and as many more as time permits. The result can be that the alternative plans are fully thought through and gamed on a map.

In addition a schedule of expected events is created that includes when the enemy is likely to take various actions in response to Soviet activity, e.g., when the enemy counterattack might be expected. What that does for a Red commander is give him a set of indicators as to how an operation is developing. He doesn't have to receive elaborate information from his units to tell him how things are going. The planning process has given him not only a prescription for action but a prediction of what should be happening on both sides and at least one alternative course of action. With these the Red commander has a basis for managing his forces in response to the inevitable exigencies of combat better, perhaps, than many Blue commanders.

The Blue planning approach, and I admit that I have seen it work in some detail only at lower levels, tends very quickly to home in on best courses of action and tends to orient around executing best courses of action with fairly cursory attention to alternative plans. The theory seems to be that when the need arises on the spot, innovation will see Blue through. That general attitude was evidenced in a comment from yesterday afternoon's discussions in which somebody said, "We all know the best plan goes out the window with the first shot." I think most American military officers believe that. And they tend to accept that as some kind of given truth.

I think a good Soviet response to that was given in Colonel Savkin's book on operational art⁴ where he was talking about the possibilities of deception. He, in effect, virtually quoted Clausewitz on deception who said essentially that deception is a very good thing and commanders ought always to strive to achieve it. But, of course, one could never predict whether it was going to be possible or not. Therefore, one didn't count on it. In effect, Clausewitz encourages people to consider deception to be something special, exotic, and apart from the operation. But, Savkin then goes on to say, it is the responsibility of leadership to create the conditions under which deception and surprise are possible. Soviets agree that the best plan will begin to degrade from the first shot. But their planners are mandated to go beyond where we tend to leave and to plan for how to respond to anticipatable directions of degradation.

⁴V.E. Savkin, *The Basic Principles of Operational Art and Tactics*, Moscow, 1972.

If we can, how would we characterize this process? First of all, I said it's goal-oriented, it's defined in terms of the objective to be achieved. Second, it's quantitative. It is a modelling process. It is mathematical. Third, it's iterative. It is not intended to find the one perfect operation. They're not designing the operation according to some best course of action. Alternatives are part of the process. Fourth, it's a top-down process. It's standardized. Virtually the same process and outline operate at all levels from the general staff down to battalions. All officers are trained throughout their career in that same standard approach to planning. As somebody else said yesterday, "It's part of the culture that they're immersed in, that they're trained in their whole careers."

Now why do they do it this way? We tend to look at this process as rather rigid lacking flexibility and discouraging innovation. I think there are three reasons why.

The first is speed. All echelons are using the same planning process. It enables a high degree of parallelism. People can begin the planning process at all levels with very partial information. They don't have to wait to begin planning until each higher echelon has done its thing. I have done some research using NTC data looking at deception as it is practiced at the tactical level and I can tell you that all too frequently the planning doesn't get done. It starts too late, with each command level taking too much time leaving not enough time to juniors to do theirs. This sequential approach that seems, in fact, to be used just wastes a lot of time and results in many, perhaps most, of the battles beginning at the NTC without a plan having been completed. The Soviet system, in theory at least, avoids that problem.

The second reason is speed. It creates time for commanders to think because the commander at any given level can get his plan done fairly quickly while his juniors are proceeding with theirs. He has time to think more about the whys of what he did. The quantification involved, the stereotyping involved, I don't believe is done because the Soviet officers are stupid but because staffs are designed to do things in a stereotyped way. I think that approach has been adopted in order to enable them to get the scum work out of the way quickly and leave them time to think about the more creative aspect of the plan. The process gives them time to think second thoughts, think about alternatives.

An interesting small piece of evidence on this point comes from some of the simulations using the JANUS model. JANUS is an interactive computer-assisted model that works best at battalion/regiment level. At the Army Development and Employment Agency at Ft. Lewis they've had JANUS operating for some time. They've done a number of iterations of essentially the same operation using a bold Red commander and a cautious Red

commander. What's interesting in the outcome is that the cautious commander takes a little more time to get there, but he gets there. We are talking about a difference in the duration of an operation of only 5-10 minutes out of a total of 35-45 minutes.

Now, is that time significant? The bold commander generally will have taken higher losses. But the force simulated is a first echelon regiment that is going to take high casualties anyway. At the time the bold commander has reached his objective, there is, according to the plan, another regiment behind him and that regiment will pass through his objective 10 or 15 minutes faster. Unfortunately, we don't have any models that model what the impact of that is. On the basis of what I've seen, these small increments of time have an important cumulative result.

The third reason is also speed. This planning process is a tool to maintain initiative—it encourages people to think about alternatives because it provides that list of predicted events. The system is less vulnerable to surprise. There's been more time to think about what Red will do if.... It's the embodiment, in fact, of the principle of the offensive. To the extent that this process is implemented in the real world, I keep reminding you as intelligence types, that it is the implementation in the real world of that offensive approach to operations that would be needed to get a war in Central Europe done in one continuous operation.

What leads me to these assertions? Two experiments in fact. One was the training course that I took in June 1987 from the C3CM JTF. It was an experiment to train some groups of U.S. officers in how to apply this planning process, to give several teams slightly different data regarding essentially the same scenario to see what level of variability resulted and how the planning process worked for the group.

The results indicate that, indeed, a group of officers very quickly became comfortable with using the Soviet approach emphasizing iteration, quantification, and development of alternatives.

What happened was that counters began piling up opposite the difficult problems as the "Soviets" were looking to create certain correlations at key points. Second, there was no excess force available to the Russians. In order to achieve the objective as laid down in that front-level operation, it took everything the front had available to them in order to make it work. The Soviets are not resource-rich, which is another key point. The result, then, is a system that gives a commander a very good management tool for using his force. Its strength is again, speed. The Soviets recognize that speed reduces losses, speed prevents the other side from reorganizing his defense; if he can present the other side with a fait accompli, it obviates nuclear threats. There are many, many advantages. It minimizes his own reaction time to what happens on the battlefield and maximizes the confusion on the other side.

The event list gives him flexibility, and flexibility in Soviet terms has much more to do with controlling the point of the main effort than it does on our side in which flexibility is much more a resource allocation question. The Soviets are not thinking of it in terms of moving resources and shifting reserves as much as they are of where the main effort is going to be and how it can be shifted in response to what's happening so as to maintain momentum and continuity of operation.

But it also has certain vulnerabilities. The first vulnerability, not surprisingly, is its speed. If this juggernaut hits something solid, it will do great damage. If it doesn't, it will have a hard time reacting to that. It is likely, as the Germans discovered in World War II, to just run on by like a locomotive exposing flanks and rear, which can make it highly vulnerable.

This has been shown also at the National Training Center (NTC), Ft. Irwin, CA, where, if you can get the OPFOR regiment to commit itself against a deliberate weak point, you can destroy it. And, in fact, on those occasions when the OPFOR out there has been thoroughly beaten, that's usually the way it happened. And it usually results in the OPFOR being destroyed in minutes either in an ambush or because, being attacked in the flank and rear, after it has passed through what it thought was the main defensive position, it was incapable of reacting to what was happening around it.

If an attrition battle occurs, that is, a defense holds and defeats the OPFOR by attrition, the attrition is generally pretty even on both sides. And I maintain that in Europe, that's a victory for their side. If they can pin us and force us into an attrition battle, they win the war.

Excessive speed results in overcommitment, i.e., aside from the immediate effect of just running past the objective, excessive speed could result in overcommitment to a given line of action and less flexibility.

Finally, of course, it's quantitative and this whole conference has well discussed the problems with quantitative analysis and the errors that can introduce. The Soviet planning approach attempts to minimize its vulnerability on this point by making conservative judgments and assumptions, i.e., making "worst case" assumptions. But this is only sensible if the Soviets are resource-rich or their opponents weak. But here you have an entire system that's based on the quantitative result. If any of those quantitative judgments are wrong, they are all wrong.

Another characteristic of the Soviet system is that power of decision resides at a higher level. Staff officers are expected to apply the system and present the results to their commander. This imposes a great load on the commander precisely when he may be under greatest stress. The Soviets try to minimize this vulnerability by involving the commander in the staff planning process much more intimately than is the case in the American process. But this imposes time and stress penalties on the commander in itself.

What's the problem for intelligence in all this? Well, the first problem for intelligence is speed. Intelligence is a historical business. Information doesn't become information until it happens and is reported. Information doesn't become intelligence until somebody analyzes it. So you're two generations from the event already. If this thing is happening as fast as the Soviets want it to happen, you don't have a lot of time to gather intelligence.⁵ All our guys at the FLOT and elsewhere are going to know its happening to them. So the problem for intelligence, I think, is really having to sort out and to prioritize what information it is that's useful to commanders, that's really useful to them and how to get that for them.

The other major problem for intelligence is how to deal with deception. If you go back to my definition that deception is about the manipulation and exploitation of enemy behavior, to talk about deception in terms of specific activities is to commit a semantic error. It assumes that there's some identifiable set of activities that can be pointed to and identified as deception, but that isn't so. You can manipulate the behavior of people with truth. You can, as General Sherman did time after time, impale the other side on the horns of a dilemma and if he chooses A, execute B. That is deception just as much as is falsity with the added benefit of providing real operational flexibility.

So merely being able to report indications that A is happening is not necessarily going to solve the problem of deception because there will also be indicators of B. Indeed, a fundamental problem for intelligence with regard to combat is that large numbers of things are going to be happening and evidence to support almost any hypothesis will be available.

In this regard, Russell Stolfi,⁶ made a great contribution to our world after the 1967 and 1973 Arab-Israeli wars. He, of all people—imagine this to the Army's shame—he went to Israel and investigated the damage and kill mechanisms to all the tanks he could lay hands

⁵Since we are discussing the planning system, the focus here is on tactical as opposed to strategic warning.

⁶Professor at the Naval Postgraduate School in Monterey who was a featured speaker at the Conference.

on and published that under the aegis of the Naval Postgraduate School. What he discovered is that when you fire hundreds of thousands of rounds of tank ammunition, everything you can think of is going to happen. Point-blank shots against the flanks of tanks bounce off. Grazing shots against 60-degree obliquity armored glacis plates penetrate.

Now, you might say, that in a certain sense, that penetration of the front plate might happen only once in 10,000 times and is, therefore a rare and unpredictable event. But with many shots and many targets it is predictable that odd things will happen. What is unpredictable is when and to whom odd things will happen. But if it was the battalion commander's tank; that may make a difference in the outcome of a battle.

Everything happens. All kinds of things, all the time. The idea that intelligence is an all-seeing eye able to pick out truth and tell people just what's important and what's not, I think is *chutspa* to the nth degree.

My fundamental point is that when it comes to deception, intelligence is the problem, it's not the cure. You are the transmission belt for the other sides deception, or at least a substantial part of it. There's what I call the Barkis contradiction. Geoffrey Barkis⁷ was responsible for the physical camouflage and deception measures that in North Africa culminated in the British decisive victory at Alamein. But he had the insight to say that as long as the other side has a good intelligence service and is capable of reacting to what it sees, it's possible to fool them again and again. I think that's something intelligence people ought to take on board.

There's also this terrible tendency of intelligence to wait, to delay, to cue, to confirm. That's all wasting time in a situation when there may be very little time to waste. And then we have this faith, a faith implicit in the money we've spent on the communication system, that large amounts of information will be able to flow from where it happens to intelligence, for analysts to analyze it and transmit it to users in time to inform planning. Communications, as we all know, is one of the two or three priority targets of both sides and probably will not be nearly so available.

Finally a major challenge for intelligence analysis is posed by deception if you accept my definition. The conceptual basis for analysis has to change from one of trying to detect deception by looking for indicators to one of analyzing the operational alternatives available to the enemy and evaluating the relative likelihood of them given an understanding of the available intelligence with reference to enemy behavior.

⁷Geoffrey Barkisy, *The Camouflage Story*, Cassell and Co., Ltd., London, 1952, p. 163.

All right, what can gamers do in this? One of the things we've been most interested in is precisely this problem of how to simulate deception. The easy thing to do that, in fact, we've tried to do a little of is to design a deception operation, to assume the deception succeeds, put it into a model, and then game its output. We did that with one RAND model and the results were, to some degree, interesting. False, because of a flaw in the way we tried to do it, but interesting nonetheless. But that's not simulating deception. All we did was go through the combat simulation that resulted from a situation that we had created and imposed on the model.

I think that our present understanding of the Soviet planning systems suggests three points of attack if we want to use it to study the impacts of deception. That is, if we used the C3CM model, or a better alternative if there is one, of the Soviet planning system to design operations from a Soviet point of view, we could use that model to test both the impact of deception on it and the potential it possesses for the use of deception.

The first is to model the flow of information. Deception is information. In fact, all warfare is information. There is a gentleman, now the Deputy Director of the White House Office of Science and Technology, who when he did advance planning for the Boeing Corporation a number of years ago wrote an elegant briefing on the subject of Information War.⁸ He demonstrated that if you could interrupt the information flow at any point you could affect the combat outcomes.

It should be possible to simulate deception if you can simulate the flow of information in a system. Now, Sam Perry at the Naval Postgraduate School in Monterey, CA is working on such a model. However, it is still in an early stage and uses experimental computer designs. It is some years down the road. I do not know if other models exist that could simulate information flows adaptable to creating deception, biasing information to explore the impact on military operations. But that is one way we could use a model of Soviet planning.

Another approach is based on the fact that the Soviet planning system is iterative and is intended to create options. Not being a modeller it is difficult for me to express the thought, but is it possible to build a combat simulation that, given a Red plan with alternatives, would simulate the decision tree resulting from the exercise of these options.

⁸Thomas P. Rona, *Weapon Systems and Information War*, Boeing Aerospace Company, Seattle, Washington, July 1976.

This approach would not simulate deception itself, only the combat results of predefined situations. But by confronting Blue with these options and forcing the scenario writers on both sides to consider and cope with alternatives, it would raise the problem and provoke thought about how to plan operations that would both use and counter deception.

The third is not so much a way to simulate deception as a systematic way to test Blue vulnerability to Red deception. The idea here is to develop Blue and Red plans in an interactive modelling environment. In running the simulation, the idea is to make the Red plan work perfectly by changing Blue as necessary. The question is, how much distortion of the Blue was necessary to make the Red Commander's dream plan work. Presumably, the more Blue's plan has to be distorted, the less vulnerable it was to Red manipulation. At one extreme, a Blue plan that required no distortion at all represents a Blue planner completely under Red control or bereft of all military competence. At the other extreme, a Blue plan that could not be distorted to fit Red's desires represented a Blue force proof against Red manipulation, whether by Blue's operational design or because Blue was, deliberately or otherwise, out of touch with Red.

That is all I had to say. If there are any questions or comments or arrows, I'd be happy to defend myself.

Another Speaker: If I could ask the first question, how would you take in the different aspects of Soviet deception where they have strategic deception, operational deception, and tactical deception?

Feer: Well, I didn't get into that. So long as we are talking about military operations I think that really doesn't matter because of an extension of something I said earlier. Good military planning, good military operations are inherently deceptive at any level. In essence I push the problem off because in the analysis of deception operationally, the level of the operation does not matter. Granted, at the strategic level the Soviets would have done deception.